

**BAKER**  
&  
**HOSTETLER** LLP  
COUNSELLORS AT LAW

**ORIGINAL**

WASHINGTON SQUARE, SUITE 1100 • 1050 CONNECTICUT AVENUE, N.W. • WASHINGTON, D.C. 20036-5304 • (202) 861-1500  
FAX (202) 861-1783  
WRITER'S DIRECT DIAL NUMBER

(202) 861-1728  
**DOCKET FILE COPY ORIGINAL**

June 13, 1997

**RECEIVED**

**JUN 13 1997**

Federal Communications Commission  
Office of Secretary

**VIA HAND DELIVERY**

Mr. William F. Caton  
Acting Secretary  
Federal Communications Commission  
1919 M Street, N.W.  
Room 222  
Washington, D.C. 20554

Re: Advanced Television Systems and Their Impact Upon the  
Existing Television Broadcast Service (MM Docket No.  
87-268)  
Request for Clarification and Partial Reconsideration

Dear Mr. Caton:

We are transmitting herewith on behalf of Scripps Howard  
Broadcasting Company a Request for Clarification and Partial  
Reconsideration of the Fifth and Sixth Report and Orders in the  
above-captioned proceeding. Please contact the undersigned if  
you have any questions.

Sincerely yours,



Michael Ruger

Enclosures

No. of Copies rec'd 04  
List ABOVE

**ORIGINAL**

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

**RECEIVED**

**JUN 13 1997**

*Federal Communications Commission  
Office of Secretary*

In the Matter of )  
)  
Advanced Television Systems )  
and Their Impact upon the ) MM Docket No. 87-268  
Existing Television Broadcast )  
Service )

TO: The Commission;

**REQUEST FOR CLARIFICATION AND PARTIAL RECONSIDERATION OF  
THE FIFTH AND SIXTH REPORTS AND ORDERS**

**Submitted by: Scripps Howard Broadcasting Company**

This Request for Clarification and Partial Reconsideration relative to the Fifth and Sixth Reports and Orders (RCPR) was prepared by Warren Happel, Vice President Engineering, Scripps Howard Broadcasting Company (SHBC). SHBC is the licensee of nine television stations consisting of six Very High Frequency (VHF) and three ULTRA High Frequency (UHF) facilities.

The Commission Staff accomplished a monumental task in preparing and writing the Fifth and Sixth Reports and Orders under the time constraints imposed. Now the task is to bring Digital Television (DTV) to the Public in a timely manner with service equal to, or better than, the Public now receives with NTSC. In support of the present task, this document is being submitted.

**SPECIFIC CHANNEL CHANGE REQUEST FOR KNXV-TV PHOENIX AZ**

In the Sixth Report and Order, APPENDIX B, DTV TABLE OF ALLOTMENTS, channel 14 is listed as the DTV channel for use with KNXV-TV's NTSC channel 15. SHBC is the licensee of KNXV-TV.

SHBC is very concerned that the use of channel 14 for DTV in Phoenix AZ, will cause serious interference to the Land Mobile Radio facilities already in-use in the Phoenix AZ metropolitan area. SHBC conducted a frequency search within 35 miles of the KNXV-TV proposed DTV transmitter site coordinates, for the frequencies of 469.5125 to 470 MHz (directly below channel 14). The results of this search are included as Exhibit 1 of the instant RCPR. Existing Land Mobile Radio equipment operating on frequencies closest to 470 MHz, (page 5 of Exhibit 1) would become useless due to front-end (pre-amplifier) overloading in the radio equipment, based on the experience of other channel 14 installations (Washington DC and Denver

Colorado for example). Additional filtering to the channel 14 DTV transmitted signal would not prevent front-end overloading. Activating channel 14 in areas where there is heavy lower adjacent channel Land Mobile activity (Phoenix AZ) would be unacceptable to the existing Land Mobile Licensees and not be in the best public interest.

Within 35 miles of the KNXV-TV transmitter, there are more than 200 Land Mobile Licensees operating on frequencies between 469.515 and 470 MHz. There is sure to be local interference from some of the Land Mobile operations to potential viewers of DTV channel 14. It is our understanding that interference from Land Mobile Licensees to the reception of channel 14 was not included in the FCC's prediction of interference to channel 14. However, interference would be present and prevent potential viewers from receiving the KNXV-TV DTV signal on channel 14. The interference would be fixed in areas of fixed site transmitters and random throughout the area from mobile radios.

A list of other available channels which could be considered for DTV by KNXV-TV at the DTV site coordinates was provided by the Association for Maximum Service Television (MSTV). The available channels for KNXV-TV at site coordinates 33° 20' 00", 112° 03' 46", were evaluated by examining each channel within the MSTV list according to the requirements of §73.623(d). The results of the evaluation are given in Table #1 below.

**TABLE #1**

<u>MSTV LIST</u>	<u>CONSIDERTIONS OF CHANNELS WHICH MAY BE AFFECTED</u>
31	DTV channel assigned in Tucson, 162.19 km separation.
47	Fourteen (14) channels above NTSC channel 33 in Phoenix.
54	Three channels above NTSC channel 51, 0.14 miles, separation; fifteen (15) channels above NTSC channel 39, a non-commercial assignment.
55	Four (4) channels above NTSC channel 51, 0.14 miles separation.
56	No considerations evident within 273.6 km, United States and Mexico (NTSC).
57	No considerations evident within 273.6 km, United States and Mexico (NTSC).
58	Seven (7) channels above NTSC channel 51, 0.14 miles separation; channel 58 application, Sierra Vista 285 km.
59	Eight (8) channels above NTSC channel 51, 0.14 miles separation.
63 through 69	Not in transition core spectrum, therefor not considered

Based on the forgoing considerations, SHBC requests that DTV **channel 14, be changed to channel 56,** (or another channel other than channel 14 as may be determined by the FCC) in the digital television table of allotments, **PART 73 – RADIO BROADCAST SERVICES,** specifically **§73.622(b).**

In the absence of other guidelines, SHBC will also be filing a **Request for Rule Change** with an identical request to change DTV channel 14 to DTV channel 56 in § 73.622(b) DTV Table of Allotments.

#### REQUEST TO RETAIN CHANNELS 2 THROUGH 6 FOR DTV:

SHBC requests channels two (2) through six (6) be retained for potential DTV use after the year 2006. This would provide time between now and 2006 for stations to evaluate the use of channels 2 through 6 for DTV. The Charlotte tests were limited in the evaluation of channel 6, and was the only low band VHF channel tested. The Charlotte tests appear to support the use of low band VHF channels for DTV.

#### REQUEST FOR CLARIFICATION OF DTV SERVICE CONTOURS

In **APPENDIX B, DTV TABLE OF ALLOTMENTS** of the Sixth Report and Order, the details were given which explain how the FCC determined the effective radiated power (ERP) assigned to the DTV allotments. The methodology employed by the FCC to pursue the goal of replicating “NTSC coverage” of a TV station which now uses an omnidirectional antenna seems to have resulted in the assignment of a directional antenna pattern (although not listed with the allotments) with the DTV allotment.

From **APPENDIX B, DTV TABLE OF ALLOTMENTS**, the following indented paragraphs were copied:

The tabulated value of effective radiated power (ERP) for DTV operation was calculated to replicate NTSC coverage. It is the maximum, over a set of uniformly spaced compass directions, of the ERP values required to extend noise-limited DTV coverage as far as the grade B contour of the NTSC station. This maximum is shown in the column entitled "DTV POWER." It is the basis for subsequent calculations of service and interference, and it was calculated using the following methodology:

The distance to the existing NTSC grade B contour was determined in each of 360 uniformly spaced compass directions starting from true north. This determination was made using information in the engineering data base, including directional antenna data, and using terrain elevation data at points separated by 3 arc-seconds of longitude and latitude. FCC curves (47 CFR §73.699) were applied in the usual way, as described in 47 CFR §73.684, to find this grade B contour distance, with the exception that dipole factor considerations were applied to the field strength contour specified in 47 CFR §73.683 for UHF.

Height above average terrain was determined every 5 degrees directly from the terrain elevation data, and by linear interpolation for compass directions in between. In cases where the TV Engineering Data Base indicated employment of a directional antenna, the ERP in each specific direction was determined through linear interpolation of the relative field values describing the directional pattern. (The directional pattern stored in the FCC computer data base provides relative field values at 10 degree intervals and may include additional values in special directions. The result of linear interpolation of these relative field values is squared and multiplied by the overall maximum ERP listed for the station in the TV Engineering Data Base to find the ERP in a specific direction.)

The replicating ERP for DTV was then calculated by a further application of FCC curves, with noise-limited DTV coverage defined as the presence of field strengths of 27.8, 35.8 and 40.8 dBμ respectively for low VHF, high VHF and UHF, at 50% of locations and 90% of the time. The specified field strengths have been calculated from the data given in Appendix A assuming that the value given there for receiver noise figure may be applied as a system noise figure including effects of electrical noise external to TV receivers. At UHF, the precise value 40.8 dBμ was applied for channel 38; and the value used for other UHF channels is 40.8 plus a dipole factor modification. This results in reception on channel 14 needing 2.3 dB less, and channel 69 needing 2.3 dB more, than the 40.8 dBμ for channel 38.

The dipole factor modification used in replication calculations is equal to 20 times log10 of the ratio of the center frequency of the UHF channel of interest to the center frequency of channel 38. For consistency, the same modification was applied to the grade B field strength contour for existing analogue UHF stations as specified in 47 CFR §73.683.

The power necessary to match (or replicate) the distance to the grade B contour with a DTV signal was computed for all 360 azimuths using the same radial-specific height above average terrain as for the NTSC case, but now in conjunction with F(50, 90) curves. The family of FCC propagation curves for predicting field strength at 50% of locations 90% of the time is found by the formula  $F(50, 90) = F(50, 50) - [F(50, 10) - F(50, 50)]$ . That is, the F(50, 90) value is lower than F(50, 50) by the same amount that F(50, 10) exceeds F(50, 50).

In general, these computations of DTV power to match the distance to the Grade B NTSC contour result in ERP values which vary with azimuth. For example, the azimuthal ERP pattern which replicates in UHF the Grade B contour of an omnidirectional VHF operation will be somewhat different because terrain has a different effect on propagation in the two bands. **Thus, the procedure described here effectively derives a new directional antenna pattern wherever necessary for a precise match according to FCC curves.**

( Note: **Emphases added.**)

It is not clear if the intention was to actually assign a directional DTV pattern with the DTV allotment or if the directional patterns were only developed to determine interference and allotments. If directional patterns are intended to be assigned with the allotments, some latitude will need to be permitted, such as plus or minus 1½ dB from the computed directional pattern. It would be very difficult, to perhaps impossible, for a manufacturer to build an antenna with a pattern that exactly replicates an antenna pattern developed from terrain contours. If an omnidirectional antenna were used with its pattern kept within the minimum power level of the directional pattern, service to the public would be seriously minimized. The use of directional DTV antennas would be further complicated with the installation of DTV antennas on the sides of existing towers, the only place available for many to be mounted during the transitional period. The use of directional DTV antennas will also increase the delivery time for a given antenna.

With these concerns, SHBC requests clarification; **Is the use of directional DTV patterns to replace omnidirectional patterns the intent or were the directional patterns only a tool used in the DTV allotment process?**

## PROTECTION OF SERVICE CONTOURS

During the transition period, stations should be protected to the Grade B contour for NTSC and the DTV service area should be protected to the same contour. This will provide the public with the same (as near as replication can make possible) service area for future DTV, as now defined for NTSC. To reduce the protected service area for DTV to anything less than the present NTSC Grade B contour could prevent the optimization of final DTV service to the public after the transition period. While interference during the transition period is the inevitable result of the imposed channel packing density, the future DTV service to the public should not be compromised. The present service NTSC service area (future DTV service area) must be protected from any further reduction and interference during the transition period.

## SUMMARY

Specifically in this RCPR, Scripps Howard Broadcasting Company requests that:

Channel 56 be substituted for channel 14 in the DTV allotment table for KNXV-TV, Phoenix AZ.

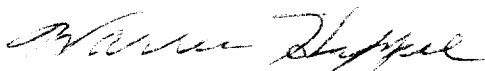
Channels 2 through 6 be retained for DTV use after the year 2006.

The use of directional DTV antennas be clarified.

The present NTSC Grade B contour also be the protected DTV service contour.

This RCPR prepared by SHBC lists only a few of the many concerns regarding the implementation of DTV. Others, such as MSTV, will be submitting a longer list of concerns. Our collective purpose is to deliver the best possible DTV service to the public, a purpose SHBC supports. To that end, Congress, the FCC, and the Broadcasting Industry share the common goal of supporting a rapid but sensible transition from NTSC to DTV. All of us will be learning more about DTV as we progress. The learning process may, and likely will cause some implementation delays. Haste will not be an excuse for delivering less than the best DTV service to the public.

Respectfully Submitted,  
Scripps Howard Broadcasting Company  
312 Walnut Street  
Cincinnati, Ohio 45202



Warren Happel  
Vice President Engineering  
June 13, 1997

Land Mobile Radios just below Channel 14 in a 35 mile radius from the KNXV-TV Transmitter  
(Sorted by Frequency)

Frequency	Callsign	DBA Name	Transmitter Address	Transmitter City	Latitude	Longitude	Elevation	ERP	Output Power	Distance in Miles
469.5125	WPHJ852	CHAMPION COMMUNICATION SERVICES IN	SOUTH MOUNTAIN	PHOENIX	331957	1120357	790.0	2.0	2.00	0.19
469.5125	KB74112	NORWEST BANK ARIZONA			332915	1120427		2.0	2.00	10.66
469.5125	WPCD246	BOHANNAN JR, ROBERT C			334430	1114300			2.00	34.50
469.5250	WNRX273	AGUA FRIA UNION HIGH SCHOOL	ATOP S MOUNTAIN	PHOENIX	332000	1120345	811.0		40.00	0.02
469.5250	WNUQ205	COMPU TRONICS CORP	ATOP SOUTH MOUNTAIN	PHOENIX	332000	1120345	811.0		40.00	0.02
469.5250	WNMI465	EAGER BEAVER ENTERPRISES	ATOP SOUTH MOUNTAIN	PHOENIX	332000	1120345	811.0		40.00	0.02
469.5250	WNJD869	OBRIEN ELECTRIC	ATOP SOUTH MTN	PHOENIX	332000	1120345	811.0	5.0	5.00	0.02
469.5250	WNXQ754	THUNDERBIRD SAMARITAN HOSPITAL	ATOP SOUTH MOUNTAIN	PHOENIX	332000	1120345	811.0		40.00	0.02
469.5250	WNMI465	EAGER BEAVER ENTERPRISES	ATOP SOUTH MOUNTAIN	PHOENIX	331959	1120347	686.0		40.00	0.02
469.5250	WNUQ205	COMPU TRONICS CORP	ATOP SOUTH MOUNTAIN	PHOENIX	331959	1120547	686.0		40.00	1.94
469.5250	WPET824	SOUTH MOUNTAIN COMMUNITY COLLEGE	7050 S 24TH ST	PHOENIX	332330	1120200	343.0		4.00	4.37
469.5250	WNYC250	BANK OF AMERICA	1825 E BUCKEYE RD	PHOENIX	332640	1120224	335.0		4.00	7.78
469.5250	WNUQ205	COMPU TRONICS CORP	ATOP THE SIERRA ESTRELLA MOUNTAINS	AVONDALE	331624	1121648	1375.0		40.00	13.19
469.5250	WNBA867	ARIZONA BILTMORE RESORT	2400 E MISSOURI	PHOENIX	333131	1120100	393.0	0.0	25.00	13.51
469.5250	WPHW473	VIEWPOINT R V & GOLF RESORT	8700 E UNIVERSITY	MESA	332538	1115054	347.0		4.00	13.95
469.5250	WPIC944	SCOTTSDALE MARRIOTT SUITES		SCOTTSDALE	333008	1115532	381.0	0.0	4.00	14.08
469.5250	WPHZ797	CONAIR CORPORATION	7491 N GLEN HARBOR BLVD	GLENDALE	333100	1121700	324.0	0.0	2.00	17.93
469.5250	WNXQ754	THUNDERBIRD SAMARITAN HOSPITAL	ATOP SHAW BUTTE	PHOENIX	333546	1120526	671.0		40.00	18.20
469.5250	WNUQ205	COMPU TRONICS CORP	ATOP SHAW BUTTE 1034 W SUNNYSIDE DR	PHOENIX	333554	1120513	649.0		40.00	18.34
469.5250	WNLJ430	RED MOUNTAIN RANCH COUNTRY CLUB	6450 E THOMAS RD	MESA	332855	1114124	463.0		10.00	23.79
469.5250	WNRX273	AGUA FRIA UNION HIGH SCHOOL	ATOP WHITE TANK MOUNTAIN	PHOENIX	333409	1123333	1213.0		40.00	32.89
469.5375	WPJN837	KIRBLE ENTERPRISES			332105	1114623		0.0	0.05	16.75
469.5375	WPJN435	MACSAN LLC			332515	1113924		0.0	0.05	24.17
469.5625	WPGZ667	MESA LUTHERAN HOSPITAL			332601	1115031	0.0		1.00	14.48
469.5625	WNVK264	TRW VEHICLE SAFETY SYSTEMS INC			331639	1113520		2.0	2.00	27.60
469.5750	WNXH303	MEDTRONICS MICRO REL	2343 W 10TH PL	TEMPE	332505	1115837	347.0		4.00	7.66
469.5750	WNVN364	MARYVALE MALL	5220 W INDIAN SCHOOL RD	PHOENIX	332942	1121016	340.0	25.0	25.00	12.78
469.5750	WNRN494	PHOENICIAN RESORT	6000 E CAMELBACK	PHOENIX	333021	1115702	404.0	0.0	4.00	13.54
469.5750	WNMM350	THE WIGWAM	INDIAN SCHOOL RD & N LITCHFIELD RD	LITCHFIELD PARK	332943	1122117	312.0	5.0	5.00	20.19
469.5750	WPIX518	BUTTERFIELD STATION LANDFILL	40404 S 99TH AVE	MOBILE	330411	1121619	404.0	0.0	4.00	21.83
469.5750	WNPE565	TOURNAMENT PLAYERS CLUB OF SCOTTS	17020 N HAYDEN RD	SCOTTSDALE	333835	1115507	469.0	4.0	4.00	22.92
469.5750	WPGB280	TERRAVITA HOME CONSTRUCTION CO	BLACK MOUNTAIN	CAVE CREEK	334819	1115638	786.0		4.00	33.27
469.5875	WPIG363	DOLLAR RENT			332557	1120130		0.0	2.00	7.18
469.6000	WPAD257	ANR MANUFACTURING LTD	SOUTH MOUNTAIN	PHOENIX	331957	1120356	790.0		4.00	0.17
469.6000	WNVN281	DOUBLETREE PARADISE VALLEY RESORT	SOUTH MOUNTAIN	PHOENIX	331957	1120356	790.0	4.0	4.00	0.17
469.6000	WNZN926	FARNSWORTH LESUEUR PROPERTY SERV	SOUTH MOUNTAIN	PHOENIX	331957	1120356	790.0	4.0	4.00	0.17
469.6000	WNSM335	FELIX CONSTRUCTION COMPANY INC	SOUTH MOUNTAIN	PHOENIX	331957	1120356	790.0	40.0	25.00	0.17
469.6000	WNVX616	INSIGHT INVESTIGATIONS	SOUTH MOUNTAIN	PHOENIX	331957	1120356	790.0	25.0	25.00	0.17
469.6000	WNVH205	SCOTTSDALE CENTER FOR THE ARTS	SOUTH MOUNTAIN	PHOENIX	331957	1120356	790.0	4.0	4.00	0.17
469.6125	KD31305	SOUTHWEST AIRLINES			332610	1120032			2.00	7.74
469.6125	WPAL827	SCOTTSDALE CONFERENCE CENTER			333236	1115525		2.0	2.00	16.56

Land Mobile Radios just below Channel 14 in a 35 mile radius from the KNXV-TV Transmitter  
(Sorted by Frequency)

Frequency	Callsign	DBA Name	Transmitter Address	Transmitter City	Latitude	Longitude	Elevation	ERP	Output Power	Distance in Miles
469.6125	WPJN837	KIRBLE ENTERPRISES			332105	1114623		0.0	0.05	16.75
469.6125	WPJN435	MACSAN LLC			332515	1113924		0.0	0.05	24.17
469.6250	KNNL711	JONES, M FRANKLYN	SOUTH MOUNTAIN	PHOENIX	331957	1120355	797.0	70.0	35.00	0.16
469.6250	KNNL711	JONES, M FRANKLYN	BANK ONE 201 N CENTRAL VE	PHOENIX	332703	1120420	331.0	70.0	35.00	8.13
469.6250	WQG854	MOTOROLA C & E INC	5005 E MC DOWELL RD	PHOENIX	332750	1115816	362.0	30.0	30.00	10.44
469.6250	KNDY290	TRIAD TECHNOLOGY INC	ATOP SHAW BUTTE	PHOENIX	333539	1120512	648.0		40.00	18.05
469.6250	KNNL711	JONES, M FRANKLYN	WHITE TANK MOUNTAIN	PHOENIX	333409	1123333	1213.0	70.0	35.00	32.89
469.6375	WPHJ852	CHAMPION COMMUNICATION SERVICES IN	SOUTH MOUNTAIN	PHOENIX	331957	1120357	790.0	2.0	2.00	0.19
469.6375	WNZM448	RESTAURA INC			332643	1120411			2.00	7.73
469.6500	WPHJ852	CHAMPION COMMUNICATION SERVICES IN	SOUTH MOUNTAIN	PHOENIX	331957	1120357	790.0	50.0	50.00	0.19
469.6500	WNFL984	COOLEY FOREST PRODUCTS	VALLEY NATIONAL BANK 241 N CENTRAL	PHOENIX	332703	1120420	331.0		35.00	8.13
469.6500	KNJH630	PENNINGTON INVESTIGATIONS INTERNATI	VALLEY NATIONAL BANK 241 N CENTRAL	PHOENIX	332703	1120420	331.0	5.0	5.00	8.13
469.6625	WPHJ852	CHAMPION COMMUNICATION SERVICES IN	SOUTH MOUNTAIN	PHOENIX	331957	1120357	790.0	2.0	2.00	0.19
469.6625	WPFW356	TOYS R US			332654	1120424	0.0		0.10	7.96
469.6625	WPCC499	PINKERTON SECURITY SERVICES			332712	1120428			2.00	8.31
469.6625	WPGT905	AVNET INC			331822	1115029	0.0		2.00	12.90
469.6625	WPIR626	TOYS R US			333219	1121107		0.0	0.10	15.82
469.6625	WPIR716	TOYS R US			333120	1115414		0.0	0.10	15.92
469.6625	WPIV261	LOOKOUT MOUNTAIN GOLF COURSE	11111 N 7TH ST	PHOENIX	333517	1120342	44.0	0.0	2.00	17.58
469.6750	WNMP652	CONTINENTAL AIRLINES			332000	1120345			3.00	0.02
469.6750	KD38043	SHORENSTEIN CO PHOENIX PLAZA			331845	1120500	0.0		25.00	1.86
469.6750	KYW500	HYATT REGENCY HOTEL	122 N 2ND ST	PHOENIX	332659	1120416	332.0	0.0	4.00	8.05
469.6750	WPHZ797	CONAIR CORPORATION	7491 N GLEN HARBOR BLVD	GLENDALE	333100	1121700	324.0	0.0	2.00	17.93
469.6750	KNGR568	BUSINESS COMM CO OP	1014 W SUNNYSIDE DR	PHOENIX	333554	1120513	649.0		50.00	18.34
469.6750	WNYU920	BOULDERS RESORT	35015 N TOM DARLINGTON DR	CAREFREE	334801	1115502	775.0	2.0	2.00	33.29
469.6750	WPPE297	FRITO LAY	1450 MARICOPA HWY	CASA GRANDE	325357	1114733	442.0		40.00	33.79
469.6875	WNZM448	RESTAURA INC			332643	1120411			2.00	7.73
469.6875	WPGX939	GAINEY RANCH GOLF CLUB INC			332712	1120428	0.0		2.00	8.31
469.6875	WPJN837	KIRBLE ENTERPRISES			332105	1114623		0.0	0.05	16.75
469.6875	WPJN435	MACSAN LLC			332515	1113924		0.0	0.05	24.17
469.7000	WPCS202	A & B VINYL POOL SPECIALIST	ATOP SOUTH MOUNTAIN	PHOENIX	331957	1120355	808.0		4.00	0.16
469.7000	WNRS864	BORG WARNER PROTECTIVE SERVICE	SOUTH MOUNTAIN	PHOENIX	331957	1120355	808.0		50.00	0.16
469.7000	KNJY474	CENTRAL TIRE INC	SOUTH MOUNTAIN	PHOENIX	331957	1120355	808.0		30.00	0.16
469.7000	WPCB580	EMM TRUCKING	ATOP SOUTH MOUNTAIN	PHOENIX	331957	1120355	808.0		4.00	0.16
469.7000	KNNW533	LINDEMAN, CHARLES R	SOUTH MOUNTAIN	PHOENIX	331957	1120355	797.0	70.0	35.00	0.16
469.7000	KNGT687	JOE E WOODS INC	13208 S CENTRAL BLDG 12E	PHOENIX	331957	1120357	790.0	5.0	5.00	0.19
469.7000	KNNW533	LINDEMAN, CHARLES R	BANK ONE 201 N CENTRAL AVE	PHOENIX	332703	1120420	331.0	70.0	35.00	8.13
469.7000	KNNW533	LINDEMAN, CHARLES R	14 S 41ST PL	PHOENIX	332651	1115928	348.0	70.0	35.00	8.89
469.7000	KNNW533	LINDEMAN, CHARLES R	SIERRA ESTRELLA MOUNTAIN	PHOENIX	331624	1121643	1375.0	70.0	35.00	13.12
469.7000	KNNW533	LINDEMAN, CHARLES R	SHAW BUTTE MOUNTAIN	PHOENIX	333539	1120512	628.0	70.0	35.00	18.05
469.7000	KNNW533	LINDEMAN, CHARLES R	WHITE TANK MOUNTAIN	PHOENIX	333409	1123333	1213.0	70.0	35.00	32.89



Land Mobile Radios just below Channel 14 in a 35 mile radius from the KNXV-TV Transmitter  
(Sorted by Frequency)

Frequency	Callsign	DBA Name	Transmitter Address	Transmitter City	Latitude	Longitude	Elevation	ERP	Output Power	Distance in Miles
469.7125	WPID654	LIPPON L L C			332302	1115952		0.0	2.00	5.12
469.7125	WNZM448	RESTAURA INC			332643	1120411			2.00	7.73
469.7125	WPCC499	PINKERTON SECURITY SERVICES			332712	1120428			2.00	8.31
469.7125	WPIV261	LOOKOUT MOUNTAIN GOLF COURSE	11111 N 7TH ST	PHOENIX	333517	1120342	44.0	0.0	2.00	17.58
469.7125	WNAD728	MAC DOWALL COMMUNICATIONS	1014 W SUNNYSIDE DR	PHOENIX	333554	1120513	649.0		2.00	18.34
469.7125	WPGP761	CLUB TERRAVITA INC			334805	1115640	0.0		2.00	33.00
469.7250	WPCW242	RUSHMORE AIR CONDITIONING	13208 S CENTRAL BLDG 12-E	PHOENIX	331957	1120357	790.0		35.00	0.19
469.7250	WPBR699	WALMART STORES INC 6060	23701 W SOUTHERN AVE	BUCKEYE	332320	1123348	276.0	5.0	5.00	29.10
469.7250	WNAE292	ASSOCIATED FARMS			333409	1123333		50.0	15.00	32.89
469.7375	WNVJ453	SPECIALIZED COMMUNICATION CONSULTA			332712	1120428			2.00	8.31
469.7375	WPKH550	TECHNOLOGY DESIGN & CONSTRUCTION			331735	1115235		0.0	2.00	11.10
469.7375	WPJN837	KIRBLE ENTERPRISES			332105	1114623		0.0	0.05	16.75
469.7375	WPJN435	MACSAN LLC			332515	1113924		0.0	0.05	24.17
469.7500	WNYU368	BELL CONCRETE INC	ATOP SOUTH MOUNTAIN	PHOENIX	332003	1120340	808.0		100.00	0.11
469.7500	WPJM378	RESORT SUITES OF SCOTTSDALE			332627	1115534		0.0	4.00	10.82
469.7500	WNGB361	SOUTHWEST AMBULANCE INC	PHX INTERNATIONAL RACEWAY 115 AVE A AVONDALE		332222	1121854	299.0	1100.0	110.00	14.79
469.7500	WNGB361	SOUTHWEST AMBULANCE INC	PHX INTERNATIONAL RACEWAY 115 AVE A AVONDALE		332222	1121854	299.0	1100.0	110.00	14.79
469.7500	WNAW219	CONSOLIDATED WATER UTILITIES LTD	ATOP WHITE TANK MOUNTAINS 31 MI WNW PHOENIX		333409	1123333	1213.0		40.00	32.89
469.7500	WNAW219	CONSOLIDATED WATER UTILITIES LTD	ATOP WHITE TANK MOUNTAINS 31 MI WNW PHOENIX		333409	1123333	1213.0		40.00	32.89
469.7500	KNHX570	JUAREZ CONTRACTING INC	ATOP WHITE TANK MOUNTAINS	PHOENIX	333409	1123333	1213.0		75.00	32.89
469.7625	WNZM448	RESTAURA INC			332643	1120411			2.00	7.73
469.7625	WPGP761	CLUB TERRAVITA INC			334805	1115640	0.0		2.00	33.00
469.7750	WNMP652	CONTINENTAL AIRLINES			332000	1120345			3.00	0.02
469.7750	WPFC979	CHARLES SCHWABB INC	4701 E FRANCISCO DR	PHOENIX	331750	1120040	332.0		30.00	3.88
469.7750	WNVA969	RENAISSANCE SQUARE	2 N CENTRAL AVE	PHOENIX	332700	1120430	6.0		5.00	8.08
469.7750	WNWJ799	MARRIOTT'S CAMELBACK INN	5402 E LINCOLN DR	SCOTTSDALE	333154	1115730	460.0	150.0	50.00	14.95
469.7750	WNDE694	DAVE BURCH CONSTRUCTION INC	ATOP SHAW BUTTE	PHOENIX	333554	1120513	649.0		50.00	18.34
469.7750	WNUL708	AMERICAN EXPRESS COMPANY	3151 W BEHREND DR	PHOENIX	334006	1120731	415.0		4.00	23.39
469.7750	WPIP589	GRAYHAWK GOLF CLUB	19600 N PIMA RD	SCOTTSDALE	334023	1115343	533.0	0.0	4.00	25.34
469.7750	WXQ815	APACHE JUNCTION UNIFIED SCHOOLS	2525 S IRONWOOD	APACHE JUNCTION	332429	1113350	507.0	30.0	30.00	29.21
469.7875	WNZM448	RESTAURA INC			332643	1120411			2.00	7.73
469.7875	WPJN837	KIRBLE ENTERPRISES			332105	1114623		0.0	0.05	16.75
469.7875	WPJN435	MACSAN LLC			332515	1113924		0.0	0.05	24.17
469.8000	KNNS290	RAMIREZ, PETE	SOUTH MOUNTAIN	PHOENIX	331957	1120355	797.0	70.0	35.00	0.16
469.8000	KNNS247	SCHJANG SR, HANS V	SOUTH MOUNTAIN	PHOENIX	331957	1120355	797.0	70.0	35.00	0.16
469.8000	WPHW827	HEYNE, EARL	201 N CENTRAL AVE	PHOENIX	332703	1120420	331.0	70.0	35.00	8.13
469.8000	KNNS290	RAMIREZ, PETE	BANK ONE 201 N CENTRAL AVE	PHOENIX	332703	1120420	331.0	70.0	35.00	8.13
469.8000	KNNS247	SCHJANG SR, HANS V	BANK ONE 201 N CENTRAL AVE	PHOENIX	332703	1120420	331.0	70.0	35.00	8.13
469.8000	KNNS290	RAMIREZ, PETE	14 S 41ST PL	PHOENIX	332651	1115928	348.0	70.0	35.00	8.89
469.8000	KNNS247	SCHJANG SR, HANS V	14 S 41ST PL	PHOENIX	332651	1115928	351.0	70.0	35.00	8.89
469.8000	WPCV870	PEARCE & SONS DISTRIBUTING INC	SIERRA ESTRELLA MOUNTAIN	KOMATKE	331115	1121215	1283.0	25.0	20.00	12.95

Land Mobile Radios just below Channel 14 in a 35 mile radius from the KNXV-TV Transmitter  
(Sorted by Frequency)

Frequency	Callsign	DBA Name	Transmitter Address	Transmitter City	Latitude	Longitude	Elevation	ERP	Output Power	Distance in Miles
469.8000	KNNS290	RAMIREZ, PETE	SIERRA ESTRELLA MOUNTAIN	PHOENIX	331624	1121643	1375.0	70.0	35.00	13.12
469.8000	KNNS247	SCHJANG SR, HANS V	SIERRA ESTRELLA MOUNTAIN	PHOENIX	331624	1121643	1375.0	70.0	35.00	13.12
469.8000	WNMX567	MESA UNIFIED SCHOOL DISTRICT 4	2700 E BROWN RD	MESA	332424	1114602	366.0	35.0	35.00	17.77
469.8000	KNNS290	RAMIREZ, PETE	SHAW BUTTE MOUNTAIN	PHOENIX	333539	1120512	628.0	70.0	35.00	18.05
469.8000	KNNS247	SCHJANG SR, HANS V	SHAW BUTTE MOUNTAIN	PHOENIX	333539	1120512	628.0	70.0	35.00	18.05
469.8000	KNNS290	RAMIREZ, PETE	WHITE TANK MOUNTAIN	PHOENIX	333409	1123333	1213.0	70.0	35.00	32.89
469.8000	KNNS247	SCHJANG SR, HANS V	WHITE TANK MOUNTAIN	PHOENIX	333409	1123333	1213.0	70.0	35.00	32.89
469.8125	KD52295	CANYON STATE COMMUNICATIONS INC			332712	1120428	0.0		2.00	8.31
469.8125	WPDY231	RITZ CARLTON			333032	1120145			2.00	12.27
469.8125	WPGT905	AVNET INC			331822	1115029	0.0		2.00	12.90
469.8125	WPGP761	CLUB TERRAVITA INC			334805	1115640	0.0		2.00	33.00
469.8250	WNQN305	ARIZONA STATE UNIVERSITY	STADIUM DR	TEMPE	332518	1115545	366.0		4.00	9.82
469.8250	WPJS710	INSIGNIA COMMERCIAL GROUP	3300 N CENTRAL AVE	PHOENIX	332910	1120425	352.0	0.0	2.00	10.56
469.8250	WNJX561	PM REALTY GROUP	PHOENIX TOWNE HOUSE TOWER 100 W CI	PHOENIX	332917	1120424	337.0	5.0	5.00	10.69
469.8250	WNJE625	MESA GOLFLAND INC	155 W HAMPTON	MESA	332429	1115031	376.0		25.00	13.73
469.8250	WNGW394	JOHN C LINCOLN HOSPITAL SECURITY	JOHN C LINCOLN HOSPITAL	PHOENIX	333405	1120413	383.0	10.0	5.00	16.20
469.8250	KD40174	STONECREEK GOLF COURSE			333601	1115852		4.0	4.00	19.01
469.8375	WNZU557	A COMMUNICATIONS			332002	1120344			2.00	0.05
469.8375	WPJN837	KIRBLE ENTERPRISES			332105	1114623		0.0	0.05	16.75
469.8375	WPJN435	MACSAN LLC			332515	1113924		0.0	0.05	24.17
469.8500	WPJN782	ARNDT & ASSOCIATES			332339	1115818		0.0	4.00	6.72
469.8500	WQT423	MC CULLOUGH MOVE A HOME INC			332703	1120420			50.00	8.13
469.8500	WPIK271	CHAMPION COMMUNICATION SERVICES IN	SHAW BUTTE	PHOENIX	333540	1120512	636.0	50.0	50.00	18.07
469.8500	WNVW503	CENTRAL ARIZONA REPEATER SERVICE	ATOP WHITE TANK MOUNTAIN	WADELL	333409	1123338	1250.0		75.00	32.95
469.8625	WPCV332	SAFEWAY INCORPORATED			332543	1115530			2.00	10.31
469.8625	WNVY894	MESA UNIFIED SCHOOL DISTRICT 4	USERY PASS	MESA	332936	1113826	762.0	20.0	2.00	26.71
469.8625	WPGP761	CLUB TERRAVITA INC			334805	1115640	0.0		2.00	33.00
469.8625	WPBS368	CENTRAL ARIZONA REPEATER SERVICE	ON TOP OF WHITE TANK MOUNTAINS	WADDELL	333440	1123424	1170.0		2.00	33.89
469.8750	WNMP652	CONTINENTAL AIRLINES			332000	1120345			3.00	0.02
469.8750	WNUD854	ROUSE COMPANY	455 N 3RD ST	PHOENIX	332708	1120401	332.0		4.00	8.21
469.8750	WNAB241	CHRISTOWN COMPANY	SOUTH MTN	PHOENIX	333120	1120539	350.0		35.00	13.16
469.8750	WNPR820	PHOENICIAN RESORT	4701 N 64TH ST	SCOTTSDALE	333021	1115702	404.0	4.0	4.00	13.54
469.8750	KNJD347	RECREATIONAL CENTER INC	7800 E CAMELBACK RD	SCOTTSDALE	333015	1115435	380.0	50.0	25.00	14.72
469.8750	WPIP577	EL DORADO OF SUN CITY CONDOMINIUMS	10330 W THUNDERBIRD BLVD	SUN CITY	333621	1121709	335.0	0.0	4.00	22.77
469.8875	WPKJ889	VALLEY BANK TOWER			332003	1120340		0.0	2.00	0.11
469.8875	KD29963	DYNAIR FUELING INC			332608	1120105			2.00	7.51
469.9000	WPIN536	COBB, MICHAEL	201 N CENTRAL AVE	PHOENIX	332703	1120420	331.0	70.0	35.00	8.13
469.9000	KB37492	L&B INSTITUTIONAL PROPERTY MANAGER:	2104 FIESTA MALL	MESA	332840	1115520	396.0	4.0	4.00	12.84
469.9000	WNBA867	ARIZONA BILTMORE RESORT	2400 E MISSOURI	PHOENIX	333131	1120100	393.0	0.0	25.00	13.51
469.9000	KKO258	A & S SHOTCRETE INC	USERY PASS	MESA	332936	1113826	762.0	150.0	50.00	26.71
469.9000	WNQQ483	HANDY PHONE	USERY PASS	MESA	332936	1113826	762.0	150.0	50.00	26.71

Land Mobile Radios just below Channel 14 in a 35 mile radius from the KNXV-TV Transmitter  
(Sorted by Frequency)

Frequency	Callsign	DBA Name	Transmitter Address	Transmitter City	Latitude	Longitude	Elevation	ERP	Output Power	Distance in Miles
469.9000	WIJ43	GILBERT PUMP & EQUIPMENT CO	ATOP WHITE TANKS MOUNTAIN	PHOENIX	333406	1123332	1212.0		75.00	32.84
469.9000	KKO258	A & S SHOTCRETE INC	WHITE TANKS	LITCHFIELD	333413	1123331	1213.0	150.0	50.00	32.90
469.9000	WNQQ483	HANDY PHONE	WHITE TANKS MOUNTAIN	LITCHFIELD	333413	1123331	1213.0	150.0	50.00	32.90
469.9125	WNWV351	OAK CANYON INC			332600	1120500			2.00	7.00
469.9125	WPBR299	SWANK AUDIO VISUALS INC			332712	1120428		0.0	2.00	8.31
469.9125	WPJN837	KIRBLE ENTERPRISES			332105	1114623		0.0	0.05	16.75
469.9125	WPJN435	MACSAN LLC			332515	1113924		0.0	0.05	24.17
469.9125	WPGP761	CLUB TERRAVITA INC			334805	1115640	0.0		2.00	33.00
469.9250	WPJS710	INSIGNIA COMMERCIAL GROUP	3300 N CENTRAL AVE	PHOENIX	332910	1120425	352.0	0.0	2.00	10.56
469.9250	WSF345	CHANDLER UNIFIED SCHOOL DISTRICT 80	350 N ARIZONA AVE	CHANDLER	331826	1115050	369.0	75.0	75.00	12.56
469.9250	WPJN629	ORANGETREE RESORT	10601 N 56TH ST	SCOTTSDALE	333518	1115731	417.0	0.0	110.00	18.59
469.9250	WNUZ848	RAWHIDE OPERATING CO INC	23023 N SCOTTSDALE RD	SCOTTSDALE	334143	1115328	558.0	80.0	40.00	26.86
469.9375	WPHJ852	CHAMPION COMMUNICATION SERVICES IN	SOUTH MOUNTAIN	PHOENIX	331957	1120357	790.0	2.0	2.00	0.19
469.9375	WPID654	LIPPON L L C			332302	1115952		0.0	2.00	5.12
469.9375	WNZP307	RESTAURA INC			332643	1120411		2.0	2.00	7.73
469.9375	KB37492	L&B INSTITUTIONAL PROPERTY MANAGER	2104 FIESTA MALL	MESA	332840	1115520	396.0	2.0	2.00	12.84
469.9375	WNUK229	AMES CONSTRUCTION INC	ATOP WHITE TANK MOUNTAINS	PHOENIX	333409	1123333	1213.0		2.00	32.89
469.9500	KD49273	HEITMAN PROPERTIES			331957	1120355		5.0	5.00	0.16
469.9500	WPBI566	MEEK PAINTING	ATOP SOUTH MOUNTAIN	PHOENIX	331957	1120355	808.0		40.00	0.16
469.9500	WPBI566	MEEK PAINTING	ATOP SOUTH MOUNTAIN	PHOENIX	331957	1120355	808.0		4.00	0.16
469.9500	WNZZ990	PROCLEAN INC	SOUTH MOUNTAIN	PHOENIX	331957	1120355	808.0	5.0	5.00	0.16
469.9500	WPHJ852	CHAMPION COMMUNICATION SERVICES IN	SOUTH MOUNTAIN	PHOENIX	331957	1120357	790.0	40.0	40.00	0.19
469.9500	WPHY649	HEYNE, EARL	201 N CENTRAL AVE	PHOENIX	332703	1120420	331.0	70.0	35.00	8.13
469.9500	WPJM378	RESORT SUITES OF SCOTTSDALE			332627	1115534		0.0	4.00	10.82
469.9500	WNUZ849	CRAIG SECURITY SERVICES	8 MI S OF I10 & ESTRELLA EXIT	GOODYEAR	332112	1122600	299.0		25.00	21.40
469.9500	WNBP454	FLETCHERS COBRE TIRE INC	ATOP WHITE TANK MOUNTAINS	PHOENIX	333409	1123333	1213.0		75.00	32.89
469.9500	KNFG676	L3X FARMS	ATOP WHITE TANK MOUNTAIN 30 MI W	PHOENIX	333409	1123333	1213.0		110.00	32.89
469.9500	WNKP592	P&L CAMBRON FARMS	ATOP WHITE TANKS MOUNTAINS	PHOENIX	333409	1123333	1213.0		5.00	32.89
469.9625	WPHJ852	CHAMPION COMMUNICATION SERVICES IN	SOUTH MOUNTAIN	PHOENIX	331957	1120357	790.0	2.0	2.00	0.19
469.9625	WPID654	LIPPON L L C			332302	1115952		0.0	2.00	5.12
469.9625	WNZP307	RESTAURA INC			332643	1120411		2.0	2.00	7.73
469.9625	WPJN837	KIRBLE ENTERPRISES			332105	1114623		0.0	0.05	16.75
469.9625	WPJN435	MACSAN LLC			332515	1113924		0.0	0.05	24.17
469.9750	WNML721	AMERICAN WEST AIRLINES INC	4000 E SKY HARBOR BLVD	PHOENIX	332408	1120206	343.0	2.0	2.00	5.02
469.9750	WNQN305	ARIZONA STATE UNIVERSITY	STADIUM DR	TEMPE	332518	1115545	366.0		4.00	9.82
469.9750	WNXW635	GRANCH GOLF CLUB INC	7281 E MOUNTAIN VIEW RD	SCOTTSDALE	333428	1115529	407.0		4.00	18.44
469.9750	WPES407	ARROWHEAD TOWNE CENTER	7700 W ARROWHEAD TOWNE CENTER	GLENDALE	333636	1121533	354.0		4.00	22.19
469.9750	WPCQ577	WARE PROPERTIES	2581 E STAGECOACH PASS	QUEEN CREEK	331242	1113216	462.0		40.00	31.43
469.9875	WPID654	LIPPON L L C			332302	1115952		0.0	2.00	5.12